REMARKS

A. Status of the Claims

Claims 52-116 were pending at the time of the Action, with claims 68-78, 80-82, 103, and 104 being withdrawn as directed to a non-elected invention. Thus, claims 52-67, 79, 83-102, and 105-116 were examined in the Action. Claims 52, 57, 59-60, 93, 108, and 111 have been amended. Support for the amendments to claims 52, 108, and 111 can be found in the specification at, for example, p. 44, ln. 16 to p. 45, ln. 13; p. 45, ln. 30 to p. 46, ln. 11. Claims 57, 59-60, and 93 were amended to correct typographical errors. Claims 105-107 have been cancelled as Applicants are pursuing the subject matter pertaining to these claims in a different application. Thus, claims 52-67, 79, 83-102, and 108-116 are currently pending and under examination in the present application.

B. Objections to the Specification

The Action noted the following informalities in the specification: (i) the preliminary amendment filed on 7/31/03 replaced the beginning paragraphs on page 1 and contained blank lines for the concurrently filed U.S. Application No. (Applicants note that the previously amended paragraph beginning on page 66, line 4, also contained a blank line for the concurrently filed U.S. Application No.); and (ii) claim 93 recites "complementary acids," but should recite "complementary nucleic acids."

Applicants have provided the U.S. Application No. in the indicated paragraphs in the amendment to the specification filed with this paper. In addition, Applicants have corrected the typographical error in claim 93. Applicants respectfully request the withdrawal of these objections.

C. The Claims Are Novel Over Kato

The Action rejects claims 52-67, 79, 83-101, 105-107, and 113-116 as being anticipated by Kato *et al.* (EP 0 870 842). Applicants traverse this rejection.

1. Claims 52-67, 79, 83-101, and 105-107

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. The Kato reference does not teach every element of the current claims. Kato describes a method in which at least two types of sample each containing a cDNA to be determined are prepared (p. 2, ln. 56 to p. 3, ln. 15); "[s]ubsequently, the cDNAs in Sample A and Sample B are digested with a specific restriction enzyme (e.g., MboI, NlaIII, HpaII or TaqI)" and different adaptors are ligated to the cut site of the cDNAs (p. 3, ln. 19-26); the adaptor-tagged cDNAs are then amplified using an adaptor primer and a gene specific primer and the amplified products are detected (p. 4, ln. 21-40). Kato's method uses multiple steps to tag a cDNA molecule including, preparing a cDNA, restriction enzyme digestion of the cDNA, and adaptor ligation to the digested cDNA.

In contrast, with the currently claimed method recited in claim 52, a first tagged nucleic acid sample is prepared by hybridizing to the first nucleic acid target of the first sample at least a first nucleic acid tag comprising a first amplification domain and a first differentiation domain, and extending the first nucleic acid tag to prepare the first tagged nucleic acid sample, if the first nucleic acid target is present in the first sample. Similarly, a second tagged nucleic acid sample is prepared by hybridizing to the first nucleic acid target of the second sample at least a second nucleic acid tag comprising a second amplification domain and a second differentiation domain, and extending the second nucleic acid tag to prepare the second tagged nucleic acid sample, if the first nucleic acid target is present in the second sample. The presently claimed method is superior to the method described by Kato because, for example, a cDNA molecule is tagged

simultaneously with its synthesis by reverse transcription. Kato does not disclose such a method of tagging a cDNA or any other nucleic acid molecule.

In view of the above, Kato does not teach all of the limitations of claims 52-67, 79, 83-101, and 105-107. Applicants, therefore, request the withdrawal of this rejection.

2. Claims 113-116

It is the Examiner's burden to establish a *prima facie* case of anticipation. Although page 5 of the present Action states that "Kato et al. teach a method of claim 79, 105, 113-116," the discussion that follows this statement appears to address only the steps of claims 79 and 105. The steps recited in claims 113-116, which are not identical to the steps in either claim 79 or 105, are not mentioned. Claims 113-116 describe a method that involves nucleic acid fingerprint analysis (*see e.g.,* Specification, p. 63, ln. 1 to p. 64, ln. 19). The Action has not attempted to show that Kato teaches a method as recited claims 113-116. Applicants further note that Kato does not appear to mention fingerprint analysis.

In view of the above, a *prima facie* case of anticipation has not been established in regard to claims 113-116. Applicants, therefore, request the withdrawal of this rejection.

D. The Claims Are Non-Obvious

1. Claim 93 is Patentable Over Kato in View of Wang

The Action rejects claim 93 under 35 U.S.C. § 103(a) as being obvious over Kato in view of Wang (U.S. 6,004,755). The Action states that Kato teaches a method of comparing one or more nucleic acid targets within two or more samples. The Action notes, however, that Kato does not specifically teach that the solid support is an array comprising a plurality of complementary nucleic acids bound to the array. The Action asserts that Wang teaches a method for quantitative gene expression analysis using a microarray that comprises a plurality of complementary probe sequences bound to it. The Action argues that it would have been obvious

to modify the method of Kato with a step of using an array as taught by Wang. Applicants traverse this rejection.

To establish a *prima facie* case of obviousness, the prior art references must teach or suggest all of the claim limitations. MPEP § 2142. For the reasons discussed in the preceding section, Kato does not teach or suggest all of the limitations of current independent claim 52. In particular, Kato does not teach or suggest a method in which a first tagged nucleic acid sample is prepared by hybridizing to the first nucleic acid target of the first sample at least a first nucleic acid tag comprising a first amplification domain and a first differentiation domain, and extending the first nucleic acid tag to prepare the first tagged nucleic acid sample, if the first nucleic acid target is present in the first sample. Likewise, Kato does not teach or suggest a method in which a second tagged nucleic acid sample is prepared by hybridizing to the first nucleic acid target of the second sample at least a second nucleic acid tag comprising a second amplification domain and a second differentiation domain, and extending the second nucleic acid tag to prepare the second tagged nucleic acid sample, if the first nucleic acid target is present in the second sample. Rather, Kato uses a number of steps including, preparing a cDNA, restriction enzyme digestion of the cDNA, and adaptor ligation to the digested cDNA in order to tag a cDNA molecule.

If an independent claim is non-obvious under 35 U.S.C. § 103(a), then any claim depending therefrom is non-obvious. MPEP § 2143.03. For the reasons set forth above, independent claim 52 is non-obvious over Kato and Wang. Accordingly, Applicants request that the obviousness rejection against dependent claim 93 be withdrawn.

2. Claims 102 and 108-112 are Patentable Over Kato in View of Carey

The Action rejects claims 102 and 108-112 under 35 U.S.C. § 103(a) as being obvious over Kato in view of Carey (WO 00/05409). The Action states that Kato teaches a method of comparing one or more nucleic acid targets within two or more samples. The Action notes,

however, that Kato does not specifically teach the use of a limiting concentration of a primer. The Action states that Carey teaches a method for quantitative analysis of gene expression using limiting primer concentrations for the targets. The Action asserts that it would have been obvious to modify the method of Kato with a step of limiting primer concentrations to develop a sensitive method for quantitation of gene expression because Carey taught that by the inclusion of a limiting concentration of a primer provides an efficient and time-saving solution for measuring two different target nucleic acids in a sample. Applicants traverse this rejection.

To establish a *prima facie* case of obviousness, the Action must show that the reference(s) teaches or suggests all of the claim limitations. MPEP § 2142. Kato and Carey do not teach or suggest all of the limitations of claims 102 and 108-112. For example, neither Kato nor Carey teaches a method comprising the steps of preparing a first tagged nucleic acid sample by hybridizing to the first nucleic acid target of the first sample at least a first nucleic acid tag comprising a first amplification domain and a first differentiation domain, and extending the first nucleic acid tag to prepare the first tagged nucleic acid sample, if the first nucleic acid target is present in the first sample; and preparing a second tagged nucleic acid sample by hybridizing to the first nucleic acid target of the second sample at least a second nucleic acid tag comprising a second amplification domain and a second differentiation domain, and extending the second nucleic acid tag to prepare the second tagged nucleic acid sample, if the first nucleic acid target is present in the second sample.

In view of the above, a *prima facie* case of obviousness has not been established because the references do not teach or suggest all of the claim limitations. Accordingly, Applicants request that the obviousness rejection against claims 102 and 108-112 be withdrawn.

E. Conclusion

Applicants believe that the foregoing remarks fully respond to all outstanding matters for this application. Applicants respectfully request that the rejections of all claims be withdrawn so they may pass to issuance.

The Examiner is invited to contact the undersigned attorney at (512)536-5654 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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